REMARKS

I. Introduction

Claims 1 to 11 are pending in the present application. No new matter has been added. Claim 1 has been amended. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II. Rejection of Claims 1 to 2 and 5 Under 35 U.S.C. § 102(b)

Claims 1 to 2 and 5 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5, 497, 755 ("Maloney"). Applicants respectfully submit that Maloney does not anticipate claims 1 to 2 and 5 for the following reasons.

Amended claim 1 recites a method for performing a functional diagnosis on a ventilation system of a crankcase of an internal combustion engine, the method including opening a valve in a vent line to "release vapors into an **intake pipe** of the engine **in response to a predefined pressure threshold being reached**, the vapors being fed together with intake air to a combustion chamber of the engine," and "closing the valve as a function of the signal of the pressure sensor for a predefined time period, the valve being an electrically controllable pulse valve."

Maloney relates to a crankcase ventilation system, with a passage disposed "within the engine for fluid communication between a crankcase and a combustion chamber." (See Abstract). While the Examiner contends that Maloney teaches a valve in a vent line releasing vapors into an intake pipe of the engine in response to a predefined pressure threshold pressure being reached, the actual teachings of Maloney directly contradict the Examiner's assertion: Maloney clearly indicates "a method of ventilating the blow-by gas within the crankcase . . . and **directing the blow-by gas to the combustion chamber directly without introduction through the air charging system**." (Col. 2, lines 49-53). Furthermore, Maloney clearly indicates that the vent valve 60 is positioned within the passage 46, which is clearly not linked to intake passage 38. (See Figs. 1-3; col. 3, l. 66 - col. 4, l. 3). Clearly, Maloney fails to teach or suggest opening a valve in a vent line to "release vapors into an **intake pipe** of the engine **in response to a predefined pressure threshold being reached**, the vapors being fed together with intake air to a combustion chamber of the engine."

For the foregoing reasons, it is respectfully submitted that Maloney does not anticipate claim 1. Claims 2 and 5 depend from claim 1, and therefore claims 2 and 5 are not anticipated by Maloney for at least the reasons given above with respect to claim 1.

Independent of the above, Maloney does not disclose all of the features of claim 2. Claim 2 recites "changing a closing time of the pulse valve as a function of at least one operating parameter, the at least one operating parameter including at least one of an oil level, a temperature, an engine speed, a load, at least one environmental parameter, an operating time, and an engine type." However, the section of Maloney cited by the Examiner merely discusses closing the intake valve 40 of the intake passage 38 as a function of the **pressure in the crankcase**, which clearly does not have anything to do with "changing a closing time of the **pulse valve** [which is the valve in the vent line] as a function of at least one operating parameter, the at least one operating parameter including at least one of an oil level, a temperature, an engine speed, a load, at least one environmental parameter, an operating time, and an engine type." Therefore, for this additional reason, Maloney does not anticipate claim 2.

In summary, it is respectfully submitted that Maloney does not disclose, or even suggest, all of the features of claims 1, 2 and 5 and, therefore, do not anticipate claims 1, 2 and 5.

III. Rejection of Claim 3 Under 35 U.S.C. § 103(a)

Claim 3 was rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,497,755 ("Maloney") in view of U.S. Patent No. 5,897,597 ("O'Daniel"). Applicants respectfully submit that claim 3 is patentable over the combination of Maloney and O'Daniel for the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s)

must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

As explained above, Maloney does not disclose, or even suggest, opening the valve to release vapors into an intake pipe of the engine, as recited in claim 1, from which claim 3 depends. Maloney clearly teaches away from this features of the claim by stating that "the present invention includes a method of . . . directing the blow-by gas to the combustion chamber **directly without introduction through the air charging system**."

Independent of the above, claim 3 is not rendered obvious by Maloney and O'Daniel for the following reasons. Maloney does not disclose, or even suggest, controlling the pulse valve as a function of the load and the engine speed of the engine, and extending a ventilation phase in response to one of a high engine speed and a small load, as recited in claim 3. O'Daniel relates to a positive crankcase ventilation system diagnostic, which determines information characterizing a fault condition "to assist in timely repair or replacement of PCV system components, such as conduits, valves, seals, etc." Col. 3, lines 7 to 8. The O'Daniel system monitors a change in air temperature, and if a fault is indicated, "details describing the condition are logged." Col. 2, lines 26 to 47. At col. 5 lines 53-62, O'Daniel merely states that upon occurrence of a time based interrupt, a stored service routine is executed for sampling various values which are used to determine whether "predictable variation in the temperature of air flowing through the PCV system" is occurring. Therefore, these sampled values are not used for actuating any part of the PCV system. The O'Daniel system merely collects and stores the data, which may be used by an automotive technician during later servicing of the vehicle. Therefore, O'Daniel does not disclose, or even suggest the features of claim 3, i.e., "controlling the pulse valve as a function of the load and the engine speed of the engine, and extending a ventilation phase in response to one of a high engine speed and a small load." For these reasons, the combination of Maloney and O'Daniel fails to disclose, or even suggest, all of the limitations of claim 3. It is therefore respectfully submitted that the combination of Maloney and O'Daniel does not render obvious claim 3.

Moreover, it is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Office Action's generalized assertions that it would have been obvious to modify or combine the references do not properly support a § 103 rejection. It is respectfully submitted that the Office Action reflects a subjective "obvious to try" standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon.

IV. Rejection of Claim 6 Under 35 U.S.C. § 103(a)

Claim 6 was rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,497,755 ("Maloney"). Applicants respectfully submit that claim 6 is patentable over Maloney for the following reasons.

As explained above, Maloney does not disclose, or even suggest, opening the valve in the vent line to release vapors into an intake pipe of the engine, as recited in claim 1, from which claim 6 depends. Maloney teaches away from the features of claim 1 by stating that "the present invention includes a method of . . . directing the blow-by gas to the combustion chamber **directly without introduction through the air charging system.**" There is no suggestion in Maloney to modify the system described therein to achieve the features of claim 1 or dependent claim 6. It is therefore respectfully submitted that Maloney does not render obvious claim 6.

V. Rejection of Claims 7-8 Under 35 U.S.C. § 103(a)

Claims 7-8 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,497,755 ("Maloney") in view of U.S. Patent No. 6,082,343 ("Oishi"). Applicants respectfully submit that claims 7 and 8 are patentable over the combination of Maloney and Oishi for the following reasons.

As explained above, Maloney does not disclose, or even suggest, opening the valve to release vapors into an intake pipe of the engine, as recited in claim 1, from which claims 7 and 8 depend. Maloney teaches away from the features of claim 1 by stating that "the present invention includes a method of . . . directing the blow-by gas to the combustion chamber directly without introduction through the air charging system." There is no suggestion in Maloney to modify the system described therein to achieve the features of claim 1 or dependent claims 7 and 8.

Oishi relates to a crankcase ventilation system for an outboard motor. Col. 7, lines 50-57 and Fig. 6 of Oishi merely provide that a "lamp 149 may be arranged to illuminate when a lubricant ssensor indicates that the lubricant level in the pan 144 is low or too high, or when other similar undesirable lubricating system conditions arise as known to those of skill in the art." Oishi does not disclose, or even suggest, "determining a value for the oil level in the crankcase with a predefined time span, from a characteristic curve of a pressure measured by the pressure sensor," as recited in claim 7.

With regard to claim 8, col. 1, lines 45-47 of Oishi merely indicate that during the compression stroke in a typical engine, "the fuel and air mixture passes by the piston seal ring and then travels to the crankcase chamber." These lines were apparently cited by the Examiner simply because they include the word, "seal." Likewise, col. 6, lines 42-44 of Oishi merely provide that a seal is provided between a starter cord and the cowling, "to provide an air and water tight seal therebetween," which does not even relate to the subject matter of claim 8 at all. These lines of Oishi also appear to have been cited by the Examiner simply because they include the word, "seal." Oishi simply does not disclose, or even suggest, the subject matter of claim 8, i.e., "deducing a seal tightness of the ventilation system within a predefined time span, from the change in pressure measured by the pressure sensor."

In summary, it is respectfully submitted that the combination of Maloney and Oishi does not disclose, or even suggest, all of the features of claim 1 or the features of dependent claims 7 and 8. Accordingly, the combination of Maloney and Oishi fails to render obvious claims 7 and 8.

VI. Claims 4 and 9-11

The Examiner made no indication in the Office Action regarding the patentability of claims 4 and 9-11, all of which depend from claim 1. In view of the above discussion regarding patentability of claim 1, Applicants respectfully submit that dependent claims 4 and 9-11 are in allowable condition by virtue of their dependence on allowable claim 1.

VII. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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